NASA'S MISSION TO PLANET EARTH

EARTH PROBES

DATA INFORMATION SYSTEM
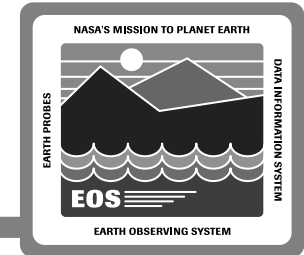
EOS

EARTH OBSERVING SYSTEM

ECS EDF Test Status

Gil Tadmor

gtadmor@eos.hitc.com

31 January 1996

Test Status

- **Ir1 Test Execution Summary:**
  - **Overall 192 Test Cases defined in the Ir1 Test Plan and Procedures (DID 322/414) were successfully executed**
  - **Many of these tests where regression tested resulting in a significantly higher number of test executions**
  - **All test drivers, simulators, scripts and data are placed under EDF CM**
  - **Original thread metrics were front loaded**
  - **Newly revised test schedule replanned these activities w/o delaying CSR**
  - **Moved CSR date up by one week**
  - **Reasons for diversion from original test schedule and metrics:**

    - **Porting of code to target platforms (misc. vendor issues wrt library versions and compatibilities)**
    - **Transition of the "EDF DAAC" to the GSFC network domain (hosts and DCE were unaccessible and required some reconfiguration of new addresses)**
    - **Extensive COTS integration and configuration issues that required continued monitoring and resolution**
    - **Resolution of final Gateway and ICD issues**

Sample Test Log

Environment Script

■ Thread / Build Name:	DAAC Toolkit (T5)
Test Case Name:	Successful Compile Using SCF Toolkit Test Procedures (B03.04.01)
Test Case ID:	TC6.4
Test Location:	■ EDF DAAC:
S/W Config./ Version:	Test driver PGS_CBP_Earth_CB_Vector_Driver_c.c and makefile SCF Toolkit
H/W Config./ Host Names:	dps3sunedf.gsfc.nasa.gov
Test Data:	
Test Tools/ Scripts:	

Test Date: 11/16/95	Test Time: 14:00	Tester(s): Jason R. Watts (jwatts)

Witness(es): Diane Womack (IV&V)	
Comments:	
NCRs Written:	
NCRs Verified:	
NCRs Un - Verified:	

■ Pass	Fail	Partial Pass/Fail
1st Run	Formal Run	Retest	Release

TEST CASE IDENTIFICATION: TC6.4
****

Date/Time: Thu Nov 16 14:21:07 EST 1995
****

TEST CONDUCTOR: jwatts
****

The UNIX SYSTEMS OF THIS TEST CASE ARE AS FOLLOWS:
****
SunOS dps3sunedf 5.4 Generic_101945-27 sun4m sparc

LIST OF ACTIVE PROCESSES:
****

TEST ENVIRONMENT OF THIS TEST CASE IS AS FOLLOWS:
****

ARCH=sun5
AUTOSERV=A31
AUTOSYS=/data/autotree1/autosys
..../ etc. /.....

SHELL VARIABLES AND THEIR VALUES:
****

ARCH=sun5
AUTOSERV=A31
AUTOSYS=/data/autotree1/autosys
PRINTER=mss3hpedf
PWD=/home/jwatts
..../ etc. /.....
LOGNAME=jwatts
testid=TC6.4

Ir1 NCR Summary - EDF Testing
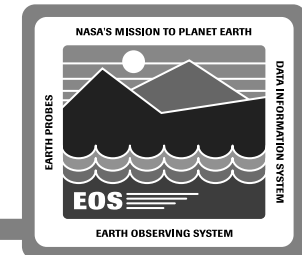
Total Problems by Severity

Severity 1	25	(17%)
Severity 2	35	(24%)
Severity 3	48	(33%)
Severity 4	23	(16%)
Severity 5	15	(10%)
TOTAL	**146**	

Report Date: 1/23/96 17:42

Unresolved Problems

Debrief Update

Severity 1	0	
Severity 2	0	
Severity 3	0	
Severity 4	0	
Severity 5	0	
TOTAL	**0**	

Report Date: 1/23/96 17:42

General NCR Statistics

When Found		
I&T	88	60%
Investigation	49	34%
Unit Test	6	4%
Coding	3	2%
TOTAL	146	

When Fixed		
Integration	114	80%
Investigation	23	16%
Installation	1	1%
Implementation	4	3%
TOTAL	142	

How Resolved		
Language Tools	5	4%
Documentation	7	5%
Configuration	51	36%
Code	59	42%
Design	2	1%
Data File	1	1%
Process	3	2%
No Fix	3	2%
Not a Bug	11	8%
TOTAL	142	

Report Date: 1/23/96 17:42

Total Problems by State

New	0	(0%)
Assign-Eval	0	(0%)
Assign-Fix	0	(0%)
Fixed	0	(0%)
Assign-Verify	0	(0%)
Verified	0	(0%)
Closed	142	(97%)
Duplicate	4	(3%)
TOTAL	**146**	

Report Date: 1/23/96 17:42

Ir1 NCR Summary (Cont.)

NCR Severity Level Definitions:

- **Severity 1 - Catastrophic bug without work around that causes total failure or unrecoverable data loss.**

- **Severity 2 - Bug which severely impairs functionality. Work around might exist but is unsatisfactory.**

- **Severity 3 - Bug that causes failure of noncritical system aspects. There is a reasonably satisfactory work around.**

- **Severity 4 - Bug of minor significance. Work around exists or, if not, the impairment is slight.**

- **Severity 5 - Very minor defect. Work around exists or the problem can be ignored.**

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Ir1 NCR Summary (Cont.)
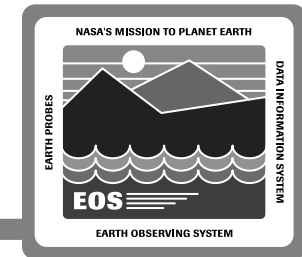
Problem Resolution Rate - ALL Severity Levels

Week	Date	New	Fixed	Diff	Unfixed
1	9/3/95	0	0	0	0
2	9/10/95	0	0	0	0
3	9/17/95	0	0	0	0
4	9/24/95	13	1	12	12
5	10/1/95	2	4	-2	10
6	10/8/95	7	4	3	13
7	10/15/95	6	4	2	15
8	10/22/95	3	1	2	17
9	10/29/95	3	1	2	19
10	11/5/95	3	7	-4	15
11	11/12/95	7	12	-5	10
12	11/19/95	21	16	5	15
13	11/26/95	12	11	1	16
14	12/3/95	19	22	-3	13
15	12/10/95	14	6	8	21
16	12/17/95	12	24	-12	9
17	12/24/95	14	18	-4	5
18	12/31/95	2	5	-3	2
19	1/7/96	5	7	-2	0
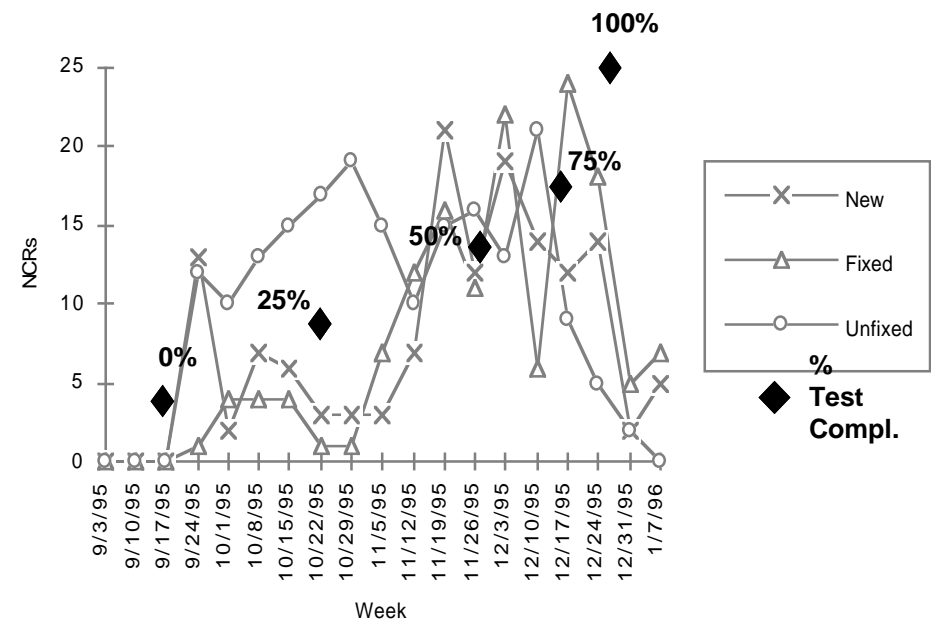
Report Date: 1/23/96 17:42

Ir1 NCR Summary (Cont.)
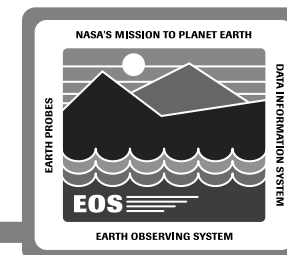
Problem Resolution Rate - Severity 1 & 2 ONLY

Week	Date	New	Fixed	Diff	Unfixed
1	9/3/95	0	0	0	0
2	9/10/95	0	0	0	0
3	9/17/95	0	0	0	0
4	9/24/95	10	1	9	9
5	10/1/95	1	4	-3	6
6	10/8/95	3	3	0	6
7	10/15/95	2	2	0	6
8	10/22/95	0	0	0	6
9	10/29/95	1	1	0	6
10	11/5/95	2	3	-1	5
11	11/12/95	4	7	-3	2
12	11/19/95	11	7	4	6
13	11/26/95	3	4	-1	5
14	12/3/95	6	8	-2	3
15	12/10/95	6	2	4	7
16	12/17/95	4	8	-4	3
17	12/24/95	4	7	-3	0
18	12/31/95	0	0	0	0
19	1/7/96	1	1	0	0
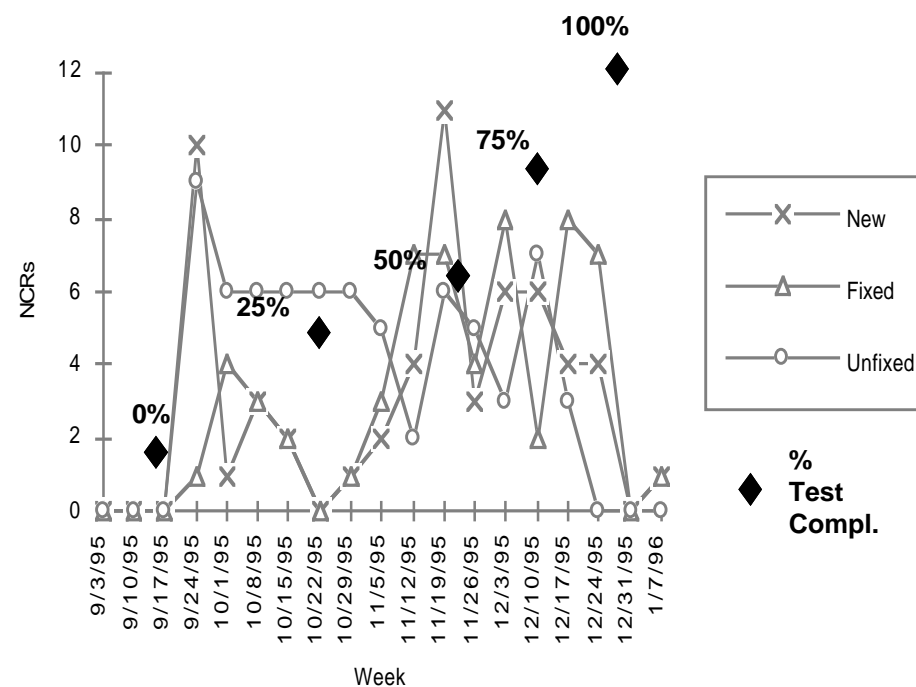
Report Date: 1/23/96 17:42

Open EDF NCR Issues (as of 1/3/96)
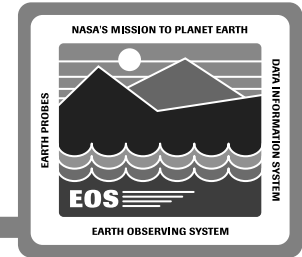
- **Total Open NCRs:**   **0**
  - **Severity 1**
    - **(None)**
  - **Severity 2**
    - **(None)**
  - **Severity 3**
    - **(None)**
  - **Severity 4**
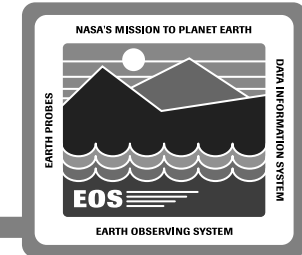   - **(None)**
  - **Severity 5**
    - **(None)**

  - **Other Issues**
    - **NCR #1085**
    - **NCR #1082**

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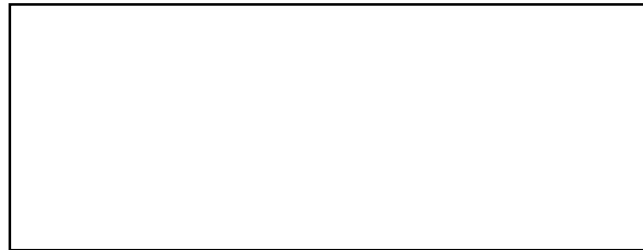
Other Issues: NCR #1085

Bug ECSed01085   Develop_Test   Submitted 950921
Project ID: Develop_Test-00010NetCDF, version n/a
 FIXED defect report   3 enclosures
                    Page 1/2
 "NetCDF for SGI 64 bit - problem"
DETECTION INFORMATION
 Detection method[*]: system test   LABORATORY INFORMATION
 Detected in phase[*]: system I&T   Evaluate engineer: larry
 Test program name: Phone number/E-mail: larry
 Test system: Date eval is due: 951006
 Version of OS: Assigned To: larry
 Problem severity (1 = Showstopper)[*]: 5 Phone/E-mail: larry
 Affects segment: Affects segment:
 Affects subsystem: Subsystem[*]:   Algorithm Integration
 Need fix by: 951010   Problem type[*]:   language tools
 Related CCR #:   Recommended change[*]: language tools
 Found in release: Phase problem caused[*]: integration
SUBMITTER INFORMATION   Analysis time (hrs): 1
 Submitter: Gil Tadmor   Est. fix time (hrs): 0
 Organization: HAIS   Fix due date: 951012
 Phone number: 0529
 Address: gtadmor@triton
Bug ECSed01085   Develop_Test
Project ID: Develop_Test-00010
 FIXED defect report
                    Page 2/2   Fixed 951012

RESOLUTION INFORMATION
 Resolution[*]: language tools
 Resolved by: larry
 Address: gtadmor@triton
 SLOC: 0
 Fixing time (hrs):   0
 Phase problem fixed[*]: integration
 Documentation affected (Y/N)? N

************ Problem ************
NetCDF on the SGI Power Challenge 64 bit mode does not work.
EDS/ARC are in touch w/ NCSA to resolve.

[10/5/95]
Since NetCDF is freeware EDS assumes no responsibility in
tracking this issue.
ARC will track and move this feature to Release A.
Severity for Ir1 was reduced to 5.

************ Resolution ************
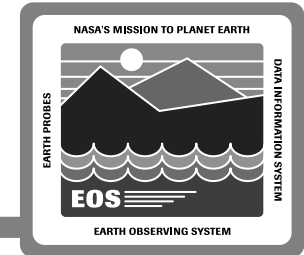Please describe your resolution to this problem:

[Larry 10/12/95]
 Move netCDF 64-bit capability to Release A.

[GT 11/16/95]
For CSR note the TK routines that use NetCDF and the fact that they are low
priority (AA, CUC, MET).

Other Issues: NCR #1085 (Cont.)

************ CSR_Update (Added 951220 by gtadmor) ***********

[LK 12/19/95]

gil, here is an email from ncsa on 64-bit mode and hdf. they claim it works.
we haven't done any verification here because the hdf guys don't have
access to the former spredf. i'll send craig johnson a note.

the e-mail from NCSA...
FYI, we (Albert Cheng) just compiled and tested our latest version of HDF
library on our Power Challenge machine using the SGI f90 compiler instead
of our usual f77 compiler. It went well and passed all tests. (All these
in the native 64 bit mode).

Albert also wrote a simple Fortran 90 program, testing the SDS interface
(e.g. sfcreate, sfwdata, sfrdata, ...). They all worked correctly.

(Also, Albert tells me that the NAG F90 compiler is not as well-behaved
as the SGI compiler, supporting what you told me last week.)

************ History ************
xddts   950921 120049 Submitted to Develop_Test by gtadmor@triton
xddts   950921 120131 Enclosure "Problem" added by gtadmor
xddts   950929 141513 N -> A (Assigned to larry) by gtadmor
xddts   951005 174838 Fields modified by gtadmor
xddts   951005 175046 Enclosure "Problem" edited by gtadmor
xddts   951012 090453 A -> O by gtadmor
xddts   951012 090507 O -> R (Resolution = language tools) by gtadmor
xddts   951012 090558 Enclosure Resolution added by gtadmor
xddts   951116 142001 Enclosure "Resolution" edited by gtadmor
xddts   951220 122805 Enclosure "CSR_Update" added by gtadmor

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Other Issues: NCR #1082
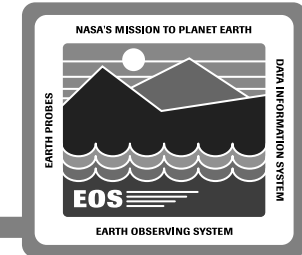
Bug ECSed01082   Develop_Test   Submitted 950920

Project ID: Develop_Test-00008IMSL, version n/a

 CLOSE defect report   4 enclosures

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 "IMSL not working on SGI 64 bit mode"

DETECTION INFORMATION

 Detection method[*]: system test   LABORATORY INFORMATION

 Detected in phase[*]: system I&T   Evaluate engineer: lmoses

 Test program name: Phone number/E-mail: lmoses

 Test system: Date eval is due:

 Version of OS: Assigned To: lmoses

 Problem severity (1 = Showstopper)[*]: 5 Phone/E-mail: lmoses

 Affects segment: Affects segment:

 Affects subsystem: DAAC TK   Subsystem[*]: Science Data Processi

 Need fix by: 950925   Problem type[*]:   language tools

 Related CCR #:   Recommended change[*]: language tools

 Found in release: Phase problem caused[*]: integration

SUBMITTER INFORMATION   Analysis time (hrs): 2

 Submitter: Gil Tadmor   Est. fix time (hrs): 2

 Organization: HAIS   Fix due date: 950921

 Phone number: 0529

 Address: gtadmor@triton

Bug ECSed01082   Develop_Test

Project ID: Develop_Test-00008

 CLOSE defect report

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Assigned-Verify 000000

RESOLUTION INFORMATION   Verified 951116

 Resolution[*]: language tools   Closed 951116

 Resolved by: larry   CLOSING INFORMATION:

 Address: gtadmor   Closing accepted by: gtadmor

 SLOC: 0   Delivered in release or version:

 Fixing time (hrs):   2

 Phase problem fixed[*]: integration

 Documentation affected (Y/N)? N

TESTING INFORMATION:

 Assigned test engineer:

 Verification Due:

 Address: gtadmor

VERIFICATION INFORMATION

 Test Status (Pass/Fail)?: P

 Elapsed test time (hrs): 0

 Attachments (Y/N)? N   (gtadmor@triton)

************ Problem ************

IMSL does not install/compile on SGI PC 64 bit mode.

Looking into vendor assistance (Visual Numerics).

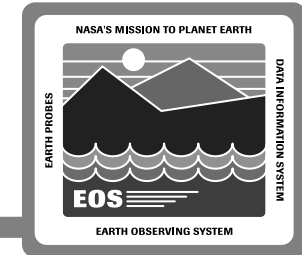************ Solution_1 (Added 950921 by gtadmor) ***********

Basically, we're assuming that ITs will not use 64 bit mode in Ir1.

In that case we shouldn't even try to field it later this year

(wait for Rel. A).

No specific Ir1 req'ts that state 64 bit capability.

Other Issues: NCR #1082 (Cont.)

[EDS]
The 64 bit port will be made available 4th quarter this year or first quarter 1996. I have not gotten specifics on dates from visual numerics. The sales person did not have that information as of last Friday. The current libraries for 32 bit will work on the IRiX 64 bit platform.

************ Resolution ************
Please describe your resolution to this problem:

Issue will be tracked through 4th qtr of 1995, however feature will most likely move to Release A.

[GT 11/16/95]
For CSR document that TKs don't use IMSL hence no impact. Sc algorithms that choose to use IMSL have the option of porting to SGI 64-bit.

************ History ************
xddts   950920 125156 Submitted to Develop_Test by gtadmor@triton
xddts   950920 125236 Enclosure "Problem" added by gtadmor
xddts   950921 115206 Enclosure "Problem" edited by gtadmor
xddts   950921 163429 Enclosure "Solution_1" added by gtadmor
xddts   950921 163507 N -> A (Assigned to lmoses) by gtadmor
xddts   950921 163612 A -> O by gtadmor
xddts   951003 090606 Enclosure "Solution_1" edited by gtadmor
xddts   951005 180020 Fields modified by gtadmor
xddts   951005 180242 O -> R (Resolution = language tools) by gtadmor
xddts   951005 180324 Enclosure Resolution added by gtadmor
xddts   951116 141418 Fields modified by gtadmor
xddts   951116 141444 R -> V by gtadmor
xddts   951116 141447 V -> C by gtadmor
xddts   951116 141621 Enclosure "Resolution" edited by gtadmor
xddts   951220 122914 Enclosure "CSR_Update" added by gtadmor

************ CSR_Update (Added 951220 by gtadmor) ***********
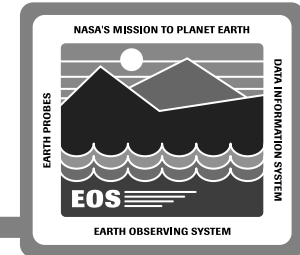[LK 12/19/95]
 i asked carol to find out the time scale for imsl 64-bit version.
at her initial inquiry, they were non-commital.

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Requirement Verification Summary

- **RBRs**
  - **Total:** 157
  - **Verified (as of 12/29/95):** 145
  - **To be completed:** 12

- **Level 4s**
  - **Total:** 378
  - **Verified (as of 12/29/95):** 316
  - **To be completed:** 62

Debrief Update 1/31/96
157
154
3
378
371
7

C-CSS-60620
C-CSS-60630
C-CSS-60640

- **Pending requirement verifications are scheduled for completion during site testing. Verification status will be documented in the Ir1 Test Report (DID 324/405).**